



Process for the production of nan-sized zeolite A

Description of Technology: The invention pertains to a method of producing nano-sized Zeolite A particles from a precursor mixture at room temperatures using small size Zeolite A particles as nucleating seed.

Patent Listing:

1. **US Patent No. 7,014,837**, Issued March 21, 2006, "Process for the production of nan-sized zeolite A"

<http://patft.uspto.gov/netacgi/nph-Parser?Sect2=PTO1&Sect2=HITOFF&p=1&u=%2Fnetacgi%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&d=PALL&RefSrch=yes&Query=PN%2F7014837>

Market Potential: Zeolites are used in many industrial applications, such as nonphosphate detergent builders, as an ingredient in thin films used for separations, as catalysts, and for making secondary ordered patterns. Zeolite crystals are typically less than about 0.5 μ m, but have been prepared as small as nanometer size. These nano-sized zeolite crystals exhibit special properties such as less diffusion resistance and extra large external surface, which are important for applications of ultra-fast ion-exchangers, catalyst supports, adsorbents, thin films, and coatings.

Benefits:

- Less diffusion resistance and extra large external surface

Applications:

- Synthesize nano-size Zeolite A from an amorphous gel precursor

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